



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,534	09/26/2003	Greg A. Hupp	TI-36552	3721
23494 7590 06/04/2008 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				
EXAMINER LAO, LUN S				
ART UNIT 2615		PAPER NUMBER		
NOTIFICATION DATE 06/04/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com

uspto@dlmail.itg.ti.com

Office Action Summary

Application No.

10/672,534

Applicant(s)

HUPP, GREG A.

Examiner

LUN LAO

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Introduction

1. This action is response to the amendment filed on 03-24-2008. Claims 1, 4-5, 7, 9-10, 12 and 16-18. Claims 1-18 are pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03-24-2008 has been entered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Knorr et al. (US PAT. 6,970,571).

Consider claim 1 Knorr teaches an audio amplifier electrical circuit comprising (see fig.2):

a pre-amplified audio circuit having volume control inputs (see fig.2 (44));

an audio amplifier connected to the pre-amplified audio source that outputs an amplified audio signal (50);

a power supervisory circuit (52) that monitors a power signal used to supply device power (54) to the audio amplifier (50); and

a volume control circuit (48) that activates the volume control inputs when the supervisory circuit detects the power signal used to supply device power(54) to the audio amplifier is beyond a pre-determined limit (see col. 2 line 35-col. 4 line 10).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-10 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick (US 2001/0003166) in view of Knorr et al. (US PAT. 6,970,571).

Consider claim 1 Gulick teaches that an audio amplifier electrical circuit comprising:

- a. a pre-amplified audio circuit (see fig.5, (112 and fig.6 (212))) having volume control inputs;
- b. an audio amplifier (114) connected to the pre-amplified audio source (4) that outputs an amplified audio signal;
- c. a power supervisory circuit (108) that monitors a power signal used to supply device power (110) to the audio amplifier (114); and
- d. a volume control circuit (see fig.6 (208)) that activates the volume control inputs (see page 3 [0033]-page 4[0039]); but Gulick does not explicitly teaches a volume control circuit that activates the volume control inputs when the supervisory circuit detects the power signal used to supply device power to the audio amplifier is beyond a pre-determined limit.

However, Knorr teaches a volume control circuit (see fig.2 (48)) that activates the volume control inputs when the supervisory circuit (52) detects the power signal used to supply device power (54) to the audio amplifier (50) is beyond a pre-determined limit (see col. 2 line 35-col. 4 line 10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Knorr into Gulick so that the amplitude limiting operation starts will be lessened.

Consider claims 2-3 Gulick teaches that the circuit of the pre-amplified audio circuit (see fig. 6 (212)) is a DAC which converts a digital audio signal to a pre-amplified audio signal; and the circuit of the volume control inputs (203) are digital (see page 3 [0028]-[0031]).

Consider claim 4 Gulick as modified by Knorr teaches the circuit wherein the supervisory circuit detects whether a supply voltage supplying device power to the audio amplifier falls below a pre-determined limit (in Knorr, see fig. 2 and see page 3 [0028]-[0031]).

Consider claim 12 Gulick teaches that an audio amplifier system for driving computer speakers connected to a USB port comprising (see fig.5):

- a. a bus port (112) connection connectable to a computer (102) from the audio amplifier system having data and power signals inherently (because by the USB port);
- b. a USB DAC (see fig.6 (212)) having volume control inputs and a USB interface (200) which can be connected to a personal computer (102) to receive a digital audio signal and output a corresponding analog audio signal;
- c. an audio amplifier (114) connected to the analog audio signal from the USB DAC (212) that outputs an amplified audio signal (114) for driving speakers (116);
- d. a power supervisory circuit (108) that monitors a power signal provided by the power input of the bus port connection and used by to supply device power (110) to the audio amplifier (114); and
- e. a volume control circuit (see fig.6 (208)) that activates the volume control inputs (see page 3 [0033]-page 4[0039]); but Gulick does not explicitly teaches a volume control circuit that activates the volume control inputs when the supervisory circuit detects the power signal provided by the power input of the bus port connection is beyond a pre-determined limit.

However, Knorr teaches a volume control circuit (48) that activates the volume control inputs when the supervisory circuit (52) detects the power signal provided by the power (54) input of the bus port connection is beyond a pre-determined limit(see col. 2 line 35-col. 4 line10).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to combine the teaching of Knorr into Gulick so that the amplitude limiting operation starts will be lessened.

Consider claim 15 Gulick teaches the system wherein the circuit of the volume control inputs (203) are digital (see page 3 [0028]-[0031]).

Consider claims 14 and 16-17 Gulick as modified by Knorr teaches the system wherein the volume control inputs are user actuatable, and wherein the volume control circuit overrides a user actuation of the volume control inputs when the supervisory circuit detects the power signal provided by the power input of the bus port connection is beyond the pre-determined limit (in Knorr, see fig. 2 and see page 3 [0028]-[0031]); and the system wherein the supervisory circuit detects whether a supply voltage corresponding to the power signal provided by the power input of the bus port connection supply to the audio amplifier falls below a pre-determined limit (in Knorr, see fig. 2 and see page 3 [0028]-[0031]); and the system wherein the supervisory circuit detects whether a power supply voltage supplying power to the audio amplifier system falls below a pre-determined limit(in Knorr, see fig. 2 and see page 3 [0028]-[0031]).

Consider claim 17 it is essentially similar to claim 16 and is rejected for the reason stated above apropos to claim 16.

Consider claims 5-10 they are essentially similar to claims 12-17 and are rejected for the reason stated above apropos to claims 12-17.

7. Claims 11, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gulick (US 2001/0003166) as modified by Knorr et al. (US PAT. 6,970,571) as applied to claims 5, 12 above, and further in view of Okamoto (US PAT. 6,573,693).

Consider claim 18 Gulick as modified by Knorr does not teach the system of further comprising a resistor between the bus port power signal input and the audio amplifier to insure a voltage drop to the pre-determined limit when the audio amplifier draws current which approaches a limit specified by a USB power signal specification.

However, Okamoto teaches the system (see figs 1-2) of further comprising a resistor (R2) between the bus port power input (reads on power supply line 152 in fig.1) and the audio amplifier (A1) to insure a voltage drop to the pre-determined limit when the audio amplifier draws current which approaches a limit specified by a USB power signal specification (100 and see col. 4 line 16-col. 5 line 64).

Therefore, it would have been obvious to one of the ordinary skill in the at the time the invention was made to combine the teaching of Okamoto in to the teaching of Gulick and Knorr so that the amplify audio system will have a voltage drop protecting system.

Consider claim 11 it is essentially similar to claim 18 and is rejected for the reason stated above apropos to claim 18.

Response to Arguments

8. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gulick (US PAT. 5,818,948) is cited to show other related automatic power foldback for audio applications.

10. Any response to this action should be mailed to:

Mail Stop ____ (explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao, Lun-See whose telephone number is (571) 272-7501. The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding

Art Unit: 2615

should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao, Lun-See
/Lun-See Lao/
Examiner, Art Unit 2615
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 05-28-2008

/Vivian Chin/

Supervisory Patent Examiner, Art Unit 2615